

630 WEST WASHINGTON BLVD.
CHICAGO, ILLINOIS 60606
(312) 454-1000 (TELEX 25-3556)



I. PRODUCT IDENTIFICATION		
Manufacturer's Name	Van Straaten Chemical Company	Telephone No.(312) 454-1000
Address	630 West Washington Blvd., Chicago, Illinois 60606	
TRADE NAME	VANTROL 293	
SYNONYMS		

[illegible]

III PHYSICAL DATA		
Boiling Point	NA	Melting Point NA
Specific Gravity(H ₂ O=1)	1.08 @ 60°F	Vapor Pressure ca. 20mmHg @ 70°F
Vapor Density (Air=1)	ca. 0.6	Solubility in H ₂ O,% By Wt. 100%
% Volatiles by Vol.	45-50% (water)	Evaporation Rate(Butyl Acetate=1) <1
Appearance and Odor	transparent blue liquid with mild odor	pH conc: 9.4 ± 0.2; 20/1: 9.0 ± 0.2 40/1: 8.9 ± 0.2

Vantrol 293

IV FIRE AND EXPLOSION DATA

Flash Point

NA

Fire Point

NA

Flammable Limits in Air % by Vol.

Lower

NA

Upper

NA

Extinguishing Media: Not a fire hazard.

Special Fire

Fighting Procedures: None needed.

Unusual Fire and

Explosion Hazard: None known.

V HEALTH HAZARD INFORMATION

Health Hazard Data:

Routes of Exposure and Effects of Overexposure

Inhalation: TLV for product not established. Refer to Hazardous Materials List for ingredient TLV's.

Skin Contact: Continued contact may cause irritation.

Skin Absorption: Skin absorption is not expected to occur.

Eye Contact: Will cause eye irritation.

Ingestion: LD₅₀ not established; do not ingest.

Emergency and First Aid Procedures

Eyes: Flush with water for 15 minutes; consult physician.

Skin: Wash with soap and water.

Inhalation: If irritation occurs, remove to fresh air area and avoid further inhalation.

Ingestion: Consult physician.

Notes to Physician:

Vantröl 293	VI REACTIVITY DATA
Conditions Contributing to Instability: None. Stable under normal conditions.	
Incompatibility: Avoid contact with oxidizing agents.	
Hazardous Decomposition Products: Complete combustion: oxides of carbon and nitrogen, HCl gas.	
Conditions Contributing to Hazardous Polymerization: Will not polymerize.	
VII SPILL OR LEAK PROCEDURES	
Steps To Be Taken If Material Is Released Or Spilled:	
Flush spills into waste disposal system.	
Waste Disposal Method:	
Non-biodegradable components of used emulsions must be removed prior to disposal. Acid-alum or alum-polymeric deemulsifiers may be used.	
VIII SPECIAL PROTECTION INFORMATION	
Ventilation Requirements: If misting occurs, provide local ventilation.	
Specific Personal Protective Equipment	
Respiratory (Specify in Detail)	If excessive misting occurs, or if associated TLV is exceeded, provide NIOSH approved respiratory equipment with TC-21C-140 cartridge combination.
Eyes	Face shield or goggles when handling concentrate.
Gloves	None required.
Other Clothing And Equipment:	
None required.	

Vantröl 293

IX SPECIAL PRECAUTIONS

Precautionary Statements

Other Handling and
Storage Requirements

Wash contaminated clothing before use.
Bring products to room temperature before use.
Keep drums closed when not in use.
Avoid contact with eyes.
Avoid breathing mists.
Do not take internally.

Prepared By: Joseph Jankauskis/Research Manager

Address: Van Straaten Chemical Company
630 W. Washington Blvd.
Chicago, IL 60606

Date: August 17, 1984

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME WHEELABRATOR-HUTSON DIVISION		EMERGENCY TELEPHONE NO. 219-255-2141
ADDRESS (Number, Street, City, State, and ZIP Code) 400 SOUTH BYRKIT STREET, MISHAWAKA, INDIANA 46544		
CHEMICAL NAME AND SYNONYMS		TRADE NAME AND SYNONYMS SUPER HONITE C-60
CHEMICAL FAMILY CERAMIC FINISHING MEDIA	FORMULA PROPRIETARY	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS		N/A	BASE METAL		N/A
CATALYST		N/A	ALLOYS		N/A
VEHICLE		N/A	METALLIC COATINGS		N/A
SOLVENTS		N/A	FILLER METAL PLUS COATING OR CORE FLUX		N/A
ADDITIVES		N/A	OTHERS		N/A
OTHERS		N/A			
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
INERT FIRED CERAMIC MEDIA					

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	4000°F	SPECIFIC GRAVITY (H ₂ O=1)	NOT DETERMINED
VAPOR PRESSURE (mm Hg.)	NIL	PERCENT VOLATILE BY VOLUME (%)	NIL
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	Insol		
APPEARANCE AND ODOR	DARK BROWN CERAMIC PIECES-NO ODOR		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	INERT SOLID	FLAMMABLE LIMITS	Lel	Uel
		N/A		
EXTINGUISHING MEDIA	N/A			
SPECIAL FIRE FIGHTING PROCEDURES				
UNUSUAL FIRE AND EXPLOSION HAZARDS	NONE			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

INERT, NON-VOLATILE CERAMIC

EFFECTS OF OVEREXPOSURE

NONE

EMERGENCY AND FIRST AID PROCEDURES

NONE

SECTION VI - REACTIVITY DATA

STABILITY

UNSTABLE

CONDITIONS TO AVOID

STABLE

X

INCOMPATIBILITY (Materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS

NONE

HAZARDOUS
POLYMERIZATION

MAY OCCUR

CONDITIONS TO AVOID

WILL NOT OCCUR

X

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

SWEEP UP

WASTE DISPOSAL METHOD

MAY BE USED IN SOLID LANDFILL. CONTACT LOCAL OFFICIALS FOR

RECOMMENDED DISPOSAL OF AN INERT CERAMIC WASTE SOLID.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

VENTILATION

LOCAL EXHAUST

SPECIAL

MECHANICAL (General)

OTHER

PROTECTIVE GLOVES

NONE REQUIRED

EYE PROTECTION

SAFETY GLASSES

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

NONE

OTHER PRECAUTIONS

NONE

Material Safety Data Sheet
O.S.H.A. Safety and Health Standards
(29 C.F.R. 1900.1200 Rev. July 1, 1984)

Section I - Material Identity

MANUFACTURERS NAME & ADDRESS

SKF Steel, Inc.
U.S. Headquarters
22 Waterville Road
P.O. Box 745
Avon, Connecticut 06001

AREA CODE & PHONE NO.

203-677-4423

NAME & TITLE OF INDIVIDUAL SUPPLYING INFORMATION

F. A. Dreher - Manager

PRODUCT NAME/TRADE NAME

Hot/Cold Rolled Alloy Steel - Bars, Wire Rod and Wire

CHEMICAL NAME & SYNONYMS

Alloy Steel Products - Example 52100

Section II - Ingredients & Residual Substances

*C.A.S. NO.	ELEMENTS	WEIGHT PERCENTAGE	PERMISSIBLE EXPOSURE LIMITS
			Contaminant Units/ Air volume
1309-37-1	BASE METAL Iron	85.0- 99.0	Iron Oxide Fumes 10mg/M ³
	ALLOYS		
7440-44-0	Carbon	.01 -1.40	Carbon Oxide 55mg/M ³
7439-96-5	Manganese	.25 -2.00	Manganese 5mg/M ³
7723-14-0	Phosphorus	.001-.035	Phosphorous (Yellow) .1mg/M ³
7704-34-9	Sulfur	.001- .15	Sulfur Dioxide 13mg/M ³
7740-21-3	Silicon	.15 -2.20	N/A 10mg/M ³
7740-02-0	Nickel	.01 -4.25	Nickel 1mg/M ³
7740-47-3	Chromium	.01 -2.50	Soluble Chronic/ Chromous Salts .5mg/M ³
			Chrome & Insoluble Salts 1mg/M ³

SKF Steel

US HEADQUARTERS

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*C.A.S. NO.	ELEMENTS	% WGT	PERMISSIBLE EXPOSURE LIMITS	UNITS
	ALLOYS			
7439-98-7	Molybdenum	.01 -1.10	Soluble Moly. Components	5mg/M ³
			Insoluble Moly. Components	15mg/M ³
7440-6-22	Vanadium	.01 - .50	Vanadium Pentoxide Dust	.5mg/M ³
			Fume	.5mg/M ³
1303-86-2	Boron	.001-.007	Boron Oxide	10mg/M ³
7429-90-5	Aluminum	.20 - .70	Aluminum Oxide	10mg/M ³
7440-70-2	Calcium	<.005	Calcium Oxide	5mg/M ³
7782-447	Oxygen	<.005	N/A	N/A
7727-379	Nitrogen	.005-.016	N/A	N/A
7440-50-8	Copper	.01 - .35	Fume	.2mg/M ³
13463-67-7	Titanium	<.005	Titanium Dioxide	10mg/M ³
7440-67-2	Zirconium	<.005	N/A	5mg/M ³
7440-66-6	Zinc	<.005	Zinc Oxide	5mg/M ³
7440-31-5	Tin	<.005	Tin Oxide	10mg/M ³
743-99-54	Magnesium	<.005	Magnesium Oxide	10mg/M ³
7440-33-7	Tungsten	<.005		1mg/M ³
7440-43-9	Cadmium	<.005	Cadmium Oxide	

All alloy steel products consist primarily of iron, but may include elements added intentionally which are present as residuals in low concentrations of less than .5 percent. The above mentioned elements may appear and vary in percentage weight depending on steel grade or according to order specification.

COATINGS

Surface coatings of petroleum oils, phosphate or dry lube (borax or lime) may be used as a rust inhibitor or lubricant.

*Chemical Abstract Society

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Boiling Point 2750 C (5000 F)	Specific Gravity (H O=1) - 7
Vapor Pressure (mm Hg) - N/A	Percent Volatile by Volume % - N/A
Vapor Density (Air=1) - N/A	Evaporation Rate(Butg 1 Acetale=1) - N/A
Solubility in Water - N/A	Auto Ignition Temp. - N/A
Appearance -	Metallic luster, gray-black, non-oxide reddish-brown.
Odor -	None
Physical State -	Solid

Special Fire Fighting Precautions - N/A

Note: Steel products in the natural state do not present an inhalation, ingestion or contact hazard. However operations such as burning, welding, brazing, sawing or grinding may result in the following effects if exposure exceeds the permissible levels from those listed in Section II.

Inhalation

Effects of Overexposure

Acute:

Iron (Iron Oxide) - Irritation of eyes, nose, throat, metallic taste in mouth, or metal fume fever.

Manganese - Irritation of eyes, nose, throat, metallic taste in mouth, or metal, fume fever.

**Chromium - Irritation of eyes, nose and lungs; derma-
titis.**

Nickel - Irritation of eyes, nose and lungs;
dermatitis

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Molybdenum - Slight irritation of eyes, nose and throat.

Vanadium - Irritation to conjunctivae and respiratory tract (greenish-black discoloration of tongue and shortness of breath).

Chronic

Iron (Iron-oxide) - Pulmonary effects, siderosis

Manganese - Bronchitis, pneumonitis, inflammation and/or ulceration of upper respiratory tract, and possible cancer of nasal passages and lungs.

Chromium - (Same as nickel)

Molybdenum - Pain in joints, hands, knees and feet

Vanadium - No reported cases of chronic effects due to overexposure to vanadium.

Emergency First Aid

Remove to fresh air, administer oxygen and seek medical attention.

Skin

Effects of Overexposure

Prolonged skin contact may cause reddening and drying of skin or possibly dermatitis (from nickel/chromium content and/or surface coating such as oil, phosphate, lime, etc.

Emergency First Aid

Wash effected areas with soap and water and seek medical attention immediately.

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Section VI - Reactivity Data

Stability - Stable - Yes
Unstable - No

Incompatibility (Materials to avoid) - Acids

Hazardous Products of Decomposition:

Metal Fumes: Iron oxide, chromium, nickel, lead, manganese, molybdenum, vanadium pentoxide, zinc oxides and other noxious gases may be produced during welding and burning operations.

Section VII - Spill or Leak Procedures

Steps to be taken in case material is released or spilled -
N/A.

Waste Disposal - N/A.

Section VII - Special Protection Information

Respiratory Protection - N.I.O.S.H. approved dust/mist/fume respirator if O.S.H.A. permissible exposure limits are exceeded (Ref. Section II) and proper ventilation is not possible.

Other Protective Equipment - (ie., safety shoes, protective clothing, gloves, eye protection, ventilation requirements). Dependent upon processing of products, e.g. welding, grinding, burning, cutting, brazing, etc. Consult various local, state and federal codes, standards, and guidelines, e.g. OSHA, ANSI, ASTM, AWS, etc.

Section IX - Special Precautions

Handling, Storage - The proper protective equipment should be used in handling and storage (See Section VII - Special Protection).

Welding and Cutting - Adequate ventilation and/or approved respiratory protection should be provided if permissible exposure limits are exceeded.

For additional information, see the American National Standard Safety in Welding and Cutting 249.1-1967 (American Welding Society Publication 249.1-1967).

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29CFR 1910.1200. Standard must be consulted for specific requirements.

QUICK IDENTIFIER

Common Name: (used on label and list)

GRAPHITE

NO. 2

SECTION 1 -

Manufacturer's Name SUPERIOR GRAPHITE CO.

Address 120 S. RIVERSIDE PLAZA

City, State, and ZIP CHICAGO, IL 60606

Emergency Telephone No. 312-349-7692 NIGHT

Other Information Calls 312-559-2999 DAY

Signature of Person Responsible for Preparation (Optional) *R. B. V.*

Date Prepared 4-15-86

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY

Hazardous Component(s) (chemical & common name(s))	OSHA PEL	ACGIH TLV	Other Exposure Limits	% (optional)	CAS NO.
GRAPHITE	5 mg/m ³	5 mg/m ³	None	70-99%	

C.A.S. NUMBER 7782-42-5

SOME GRAPHITE MAY CONTAIN SILICA IN VARIOUS AMOUNTS

C.A.S. #7631-86-9- 1 mg/m³ TLV

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point	NONE	Specific Gravity (H ₂ O = 1)	2.0	Vapor Pressure (mm Hg)	NONE
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Vapor Density (Air = 1) N.A.

Solubility in Water	NEGLIGIBLE	Reactivity in Water	UNKNOWN
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Appearance and Odor	Dark-Black-Grey-Granular-Powder	Melting Point	NONE
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SECTION 4 - FIRE & EXPLOSION DATA

Flash Point	NONE	Method Used	NONE	Flammable Limits in Air % by Volume	LEL Lower	NONE	UEL Upper	NONE
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Auto-Ignition Temperature	NONE	Extinguisher Media	UNKNOWN
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Special Fire Fighting Procedures NONE

Unusual Fire and Explosion Hazards NONE KNOWN

SECTION 5 - PHYSICAL HAZARDS (REACTIVITY DATA)

Stability	Unstable	Conditions to Avoid	NONE
Compatibility	Stable <input checked="" type="checkbox"/>		
Materials to Avoid			NONE

Hazardous composition Products

Hazardous polymerization	May Occur	Conditions to Avoid	NONE
	Will Not Occur <input checked="" type="checkbox"/>		

SECTION 6 - HEALTH HAZARDS

Acute	UNKNOWN	2. Chronic	UNKNOWN
Routes and Conditions of Exposure	POSSIBLY ALLERGENIC		
Health Conditions Generally aggravated by Exposure	MINOR IRRITATION TO EYES OR NASAL PASSAGES		

Chemical Listed as Carcinogen or Potential Carcinogen	No	National Toxicology Program	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	UNK.	I.A.R.C. Monographs	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	UNK.	OSHA	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	UNK.
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Emergency and First Aid Procedures REMOVE FROM AREA-WASH HANDS/SKIN WITH SOAP AND WATER-DRINK WARM MILK OR WATER, IF INGESTED FLUSH EYES WITH RUNNING WATER.

ROUTES OF EXPOSURE	1. Inhalation	REMOVE FROM EXPOSURE - TO WELL VENTILATED AREA!
	2. Eyes	FLUSH WITH RUNNING WATER
	3. Skin	WASH WITH SOAP AND WATER
	4. Ingestion	DRINK WARM MILK/WATER - CALL A DOCTOR

SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken during Handling and Storage NONE

Precautions NONE

Precautions to be Taken in Case of Spill or Release of Material Swept Up or Vacuum

Disposal (Consult federal, state, and local regulations) USA AS SANITARY LAND FILL, HOWEVER, DISPOSAL MUST BE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS.

SECTION 8 - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

Respiratory Protection by Type	USE OSHA APPROVED DUST MASKS							
Respiratory Protection	REQUIRED	Local Exhaust	Use Ambient amount of air	Mechanical (General) as local	Special	None	Other	None
Protective Clothing	Wear Rubber Gloves		Eye Protection		Wear goggles			
Protective Clothing or Equipment	Use workclothes for dust protection							
Hygiene Practices	Dust collectors should be used in all work areas to trap airborne particulates.							

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME The Andersons		EMERGENCY TELEPHONE NO. (419) 893-5050
ADDRESS (Number, Street, City, State, and ZIP Code) P.O. Box 119, Illinois Ave., Maumee, OH 43537		
CHEMICAL NAME AND SYNONYMS Corncobs		TRADE NAME AND SYNONYMS GRIT-O'COBS®, LITE-R-COBS®
CHEMICAL FAMILY Cellulose/Lignin	FORMULA (C ₆ H ₁₀ O ₅) _n	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS		--	BASE METAL		--
CATALYST		--	ALLOYS		--
VEHICLE		--	METALLIC COATINGS		--
SOLVENTS		--	FILLER METAL PLUS COATING OR CORE FLUX		--
ADDITIVES		--	OTHERS		--
OTHERS		--			--
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
Nuisance dust				(OSHA)	15 mg/m ³
				(ACGIH) *	10 mg/m ³

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H ₂ O=1)	0.8 - 1.2
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	7.4% - 9.5%		
APPEARANCE AND ODOR	Tan granules essentially odorless		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	350°F OC/388°F CC	FLAMMABLE LIMITS	N/A	Lel	Uel
EXTINGUISHING MEDIA	Water				
SPECIAL FIRE FIGHTING PROCEDURES	None				
UNUSUAL FIRE AND EXPLOSION HAZARDS					
Minimum explosive concentration (-200 mesh GRIT-O'COBS dust cloud)					
0.045 oz./cu. ft.					

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

Not established. Use Nuisance TLV-15 mg/M³ total dust, 5 mg/M³ respirable.

EFFECTS OF OVEREXPOSURE

General nuisance effects--no specific hazards.

EMERGENCY AND FIRST AID PROCEDURES

No acute hazards known.

SECTION VI - REACTIVITY DATA

STABILITY

pH 7.3

UNSTABLE

STABLE

X

CONDITIONS TO AVOID

INCOMPATIBILITY (Materials to avoid)

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

Combustion byproducts may be CO, NO_x--typical of wood smoke.

HAZARDOUS POLYMERIZATION

MAY OCCUR

WILL NOT OCCUR

X

CONDITIONS TO AVOID

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Vacuum, sweep or shovel up.

WASTE DISPOSAL METHOD

No special requirements.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

NIOSH approved dust mask if above nuisance dust TLV as necessary to control below

VENTILATION

LOCAL EXHAUST

MECHANICAL (General)

nuisance dust levels.

SPECIAL

N/A

OTHER

N/A

PROTECTIVE GLOVES

Not required

EYE PROTECTION

Not required--goggles recommended

OTHER PROTECTIVE EQUIPMENT

None required

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

None

OTHER PRECAUTIONS

None

NORTON

LM-1689 Rev. 9/77

DIVISION MD	PLANT Worcester, Mass.
DEPARTMENT Product Engineering	DATE October 10, 1978
NAME PERSON COMPLETING FORM Henry B. Rand	ABOVE FOR NORTON COMPANY USE ONLY

HAZARD RATING

**MATERIAL SAFETY DATA SHEET**

Name of person completing form if completed by supplier _____

Date _____

SECTION I

MANUFACTURERS NAME Norton Company		EMERGENCY TELEPHONE NO. 617-853-1000
ADDRESS (Street, City, State, and ZIP Code) 1 New Bond Street, Worcester, Mass. 01606		
CHEMICAL NAME AND SYNONYMS Aluminum Oxide	TRADE NAME E-252 Alundum	
CHEMICAL FAMILY Oxide Abrasive	FORMULA Al ₂ O ₃	
CAS REGISTRY NO. 1344-28-1	IS MATERIAL REGULATED BY: EPA <input type="checkbox"/> OSHA <input type="checkbox"/> DOT <input type="checkbox"/> OTHER (Specify)	
OSHA OR DOT REQUIRED LABELING:		

SECTION II COMPOSITION

COMPOSITION	%	TOXIC OR HAZARDOUS YES NO	TLV or EQUIV. - TYPE OF HAZARD			
			ORAL	DERMAL	INHALATION	OTHER
MAJOR COMPONENT Aluminum Oxide	60-90%					
MAJOR COMPONENT Silicon Carbide	5-15%					
MAJOR COMPONENT * SiO ₂	2-20%					
PIGMENT NA						
CATALYST NA						
VEHICLE NA						
SOLVENTS NA						
ADDITIVES NA						
OTHERS * The majority of the SiO ₂ is present as chemically combined silica with the free silica less than 1%. The TLV for this silica level is 15 mg/m ³ which is calculated from OSHA Table G-3 for mineral dust.						

SECTION III PHYSICAL DATA

BOILING POINT 3450 °F 1900°C	MELTING POINT 3450 °F 1900°C	SPECIFIC GRAVITY (H ₂ O=1) 3.85 gm/cc
VAPOR PRESSURE (mmHg) NA	PERCENT VOLATILE BY VOLUME NA	VAPOR DENSITY (Air=1) NA
EVAPORATION RATE (_____ -1) NA	SOLUBILITY IN WATER (g/100 cc) Nil	SOLUBILITY IN ALCOHOL (g/100 ml) Nil
SOLUBILITY IN OTHER SOLVENT Nil	APPEARANCE AND ODOR Granular, Multicolored, No odor	

NA = Not Applicable

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used) NA	FLAMMABLE LIMITS	Let	Uel
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES Will not burn			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE 15 mg/m³ Total dust; 5 mg/m³ respirable dust

EFFECTS OF OVEREXPOSURE Choking sensation if area is extremely dusty

Leave area or wear respirator, if TLV is exceeded.

EMERGENCY AND FIRST AID PROCEDURES

* "Silica TLV is determined from bulk sample. Actual airborne concentrations may vary and should be tested by user under normal use conditions."

SECTION VI REACTIVITY DATA

STABILITY

UNSTABLE

CONDITIONS TO AVOID

STABLE

X

ACCELERATOR, etc. (Materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION

MAY OCCUR

CONDITIONS TO AVOID

WILL NOT OCCUR

X

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

No special precautions

WASTE DISPOSAL METHOD

Landfill or equivalent

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

Nuisance dust type

VENTILATION

LOCAL EXHAUST

If TLV is exceeded

SPECIAL

MECHANICAL (General)

If TLV is exceeded

OTHER

PROTECTIVE GLOVES

EYE PROTECTION

Safety glasses, Goggles, etc.

OTHER PROTECTIVE EQUIPMENT

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

No special precautions

OTHER PRECAUTIONS

QUANTITY USED PER MONTH (Indicate approximate amount)

NORTON COMPANY USE ONLY

OZ

LBS

TONS

ml

PTS

QTS

GAL.

FREQUENCY OF USAGE

CHECK FREQUENCY BELOW

DAILY

WEEKLY

MONTHLY

INFREQUENT

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME General Abrasive Company		EMERGENCY TELEPHONE NO. (716) 278-1234
ADDRESS (Number, Street, City, State, and ZIP Code) 2000 College Avenue, Niagara Falls, New York 14305		
CHEMICAL NAME AND SYNONYMS Aluminum Oxide	TRADE NAME AND SYNONYMS Aluminum Oxide	
CHEMICAL FAMILY Metallic Oxide	FORMULA Al ₂ O ₃	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE	NOT APPLICABLE		METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	5400 Deg F.	SPECIFIC GRAVITY (H ₂ O=1)	3.5-4.0
VAPOR PRESSURE (mm Hg.)		PERCENT VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (=1)	N/A
SOLUBILITY IN WATER	Insol.		
APPEARANCE AND ODOR	Crystalline solid various colors; usually brown, white or pink, No odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	N/A	FLAMMABLE LIMITS N/A	LeI	UeI
EXTINGUISHING MEDIA	Non-flammable			
SPECIAL FIRE FIGHTING PROCEDURES				
UNUSUAL FIRE AND EXPLOSION HAZARDS				

THRESHOLD LIMIT VALUE	Classified under OSHA as Inert or nuisance dust.
EFFECTS OF OVEREXPOSURE	Pulmonary effects of Inert dust.
EMERGENCY AND FIRST AID PROCEDURES	
N/A	

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid) None			
HAZARDOUS DECOMPOSITION PRODUCTS None			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	Normal precautions for Inert or nuisance dusts and particulates.
WASTE DISPOSAL METHOD	As above.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)		
Approved respirator for nuisance dust.		
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General)	OTHER
PROTECTIVE GLOVES	N/A	EYE PROTECTION
OTHER PROTECTIVE EQUIPMENT	N/A	If Applicable

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	None
OTHER PRECAUTIONS	

MATERIAL SAFETY DATA SHEET
SAFETY-KLEEN CORP.
 777 Big Timber Rd.
 Elgin, IL 60120



IDENTITY (As Used on Label and List) Safety-Kleen 105 Solvent-MS		Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.	
Section I		Part #6617	
Manufacturer's Name Safety-Kleen Corp.		Emergency Telephone Number 312/697-8460	
Address (Number, Street, City, State, and ZIP Code) 777 Big Timber Road		Telephone Number for Information 312/697-8460	
Elgin, Illinois 60120		Date Prepared 11/6/85	
		Signature of Preparer (optional)	

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Mineral Spirits	500 ppm	100 ppm	-	99.9+
Dye	Unk.	Unk.	-	0.003
Anti-Static Agent	Unk.	Unk.	100 est.	1 ppm

Section III — Physical/Chemical Characteristics

Boiling Point	310-400°F	Specific Gravity (H ₂ O = 1)	0.775-0.795
Vapor Pressure (mm Hg.) @ 68°F	2	Melting Point	N/A
Vapor Density (AIR = 1)	4.9	Evaporation Rate (Toluene = 1)	0.2
Solubility in Water	Negligible.		
Appearance and Odor	Clear green liquid with characteristic hydrocarbon odor.		

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	105°F TCC	Flammable Limits	LEL 0.7	UEL 6.0
Extinguishing Media	CO ₂ , foam, dry chemical, water (mist only)			
Special Fire Fighting Procedures	None.			
Unusual Fire and Explosion Hazards	None.			

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Heat, sparks, flame and fire.

Incompatibility (Materials to Avoid)

Strong oxidizing agents.

Hazardous Decomposition or Byproducts

Normally none; however, incomplete burning may yield carbon monoxide.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section VI — Health Hazard Data

Route(s) of Entry:	Inhalation? yes	Skin? no	Ingestion? yes
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Health Hazards (Acute and Chronic)

Skin - can cause drying of skin. Eyes - severe irritant. Inhalation - excessive inhalation can cause headache, dizziness and nausea. Ingestion - harmful or fatal if swallowed.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
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Not a known or potential carcinogen.

Signs and Symptoms of Exposure

Drying of skin, eye irritation, headache, dizziness, nausea.

Medical Conditions

Irritantly Aggravated by Exposure Unknown.

Emergency and First Aid Procedures

Skin - Wash with soap and water. Eyes - Irrigate with water. Inhalation - Remove to fresh air source and call a physician. Ingestion - DO NOT induce vomiting. Call a physician.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled

Catch and collect for recovery as soon as possible. Avoid exposure to sparks, fire, flame, hot surfaces.

Waste Disposal Method

Dispose of in accordance with company, local, state and federal regulations.

Precautions to Be Taken in Handling and Storing

Combustible. Keep away from heat, sparks, flame. Use with adequate ventilation. Avoid long and repeated contact with skin. If clothes are inadvertently saturated with solvent

Other Precautions

DO NOT SMOKE- keep away from ignition sources. Keep out of reach of children.

Section VIII — Control Measures

Respiratory Protection (Specify Type)

Self-contained breathing apparatus for concentrations above TLV limits.

Ventilation	Local Exhaust Normal room ventilation.	Special None.
	Mechanical (General) None.	Other None.

Protective Gloves: In cases of prolonged contact, wear rubber gloves.

Eye Protection

Yes - eyeglasses, safety glasses.

Other Protective Clothing or Equipment

N/A

Work Hygiene Practices

Do not smoke while using this solvent.

Chemtrol®

DATA SHEET

VIBRATORY and BARREL FINISHING COMPOUNDS

PRODUCT DESCRIPTION and APPLICATION

PRODUCT: CHEMTROL #312

APPLICATION: Powdered alkaline descaler for rust and heat treat scale removal. Also effective for metallic smut removal and for cleaning and sharpening media. This alkaline product requires no neutralizing of treated parts and causes no hydrogen embrittlement.

DESCRIPTION: A free-flowing off white alkaline compound containing caustic soda and biodegradable dispersants and detergents. Non-flammable. Total alkalinity (as N_2O) = 45.7% pH of 1% solution = 12.8.

HANDLING: Danger - Highly alkaline. Do not take internally. Can cause eye or skin burns or irritation. Wear rubber gloves and eye protection when handling. Do not mix with acidic materials.

FIRST AID:

Contact with skin - Wash well with soap and water.

Contact with eyes - Flush promptly and thoroughly, with clear water. Seek medical attention.

Internal - Seek immediate medical attention.

STORAGE: Store in cool dry place in closed container. Highly alkaline. Do not store near acidic materials. Keep out of reach of children.

DISPOSAL: Effluents may require neutralization to meet local codes. Settle solids if necessary.

PACKAGING: 100 lb. and 400 lb. net non-returnable polyethelene lined fibre drums.


Precision Finishing Inc.

P.O. BOX 272 • SELLERSVILLE, PENNSYLVANIA 18000

EMERGENCY AND FIRST AID PROCEDURES:

- Inhalation** Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Contact a physician.
- Ingestion** If conscious, drink large quantities of water or acidic beverages (tomato or orange juice, carbonated soft drinks). Do not induce vomiting. Take immediately to a hospital or physician. If vomiting occurs, administer additional water. In unconscious, or in convulsions, take immediately to a hospital. Do not attempt to induce vomiting or give anything by mouth to an unconscious person.
- Skin** Immediately flush skin with plenty of water while removing contaminated clothing and boots. Call a physician. If skin feels slippery, caustic may still be present in sufficient quantities to cause rash or burn. Continue washing until slick skin feeling is gone. Thoroughly clean contaminated clothing and boots before reuse or discard.
- Eye** Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids open during this flushing with water. Call a physician.

SECTION 06 - CORROSIVITY AND REACTIVITY DATA

- Stability:** Stable
- Incompatibility:** Organic materials & concentrated acids may cause violent reactions; caustic soda reacts with magnesium, aluminum, zinc (galvanized), tin, chromium, brass & bronze generating hydrogen which is explosive. Also, caustic soda may react with various food sugars to generate carbon monoxide.
- Polymerization:** Will not occur.

SECTION 07 - STORAGE, HANDLING AND USE PROCEDURES

- Normal Storage and Handling:** Normal warehouse procedures
- Normal Use:** Normally used as a 2-6% solution in water in vibratory and tumbling equipment.
- Steps to be taken in case of leaks or spills:** Dike area to contain spill. Only trained personnel with proper protective equipment should be permitted in area. Reclaim if possible. Or, dilute spill with large amounts of water then neutralize with dilute acid. Use vacuum truck to pick up neutralized material for disposal (see below). After visible traces have been removed, flush area with large amounts of water.
- Waste Disposal Method:** Dispose of in approved hazardous waste facility. Care must be taken when using or disposing of chemical materials and/or their containers in accordance with the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act and all state or local law/regulations regarding disposal.

MATERIAL SAFETY DATA SHEET

PRECISION FINISHING, INC.
BOX 272
SELLERSVILLE, PA 18960

EMERGENCY TELEPHONE NO.
(215) 257-6862

SECTION 01 - IDENTIFICATION

Product Name: Chemtrol 312
Product Type: Alkaline descaler
DOT Hazard Class: Corrosive material

SECTION 02 - HAZARDOUS INGREDIENTS

<u>Chemical Name</u>	<u>CAS #</u>	<u>Hazard</u>
Sodium Hydroxide	1310-73-2	Corrosive to eyes, skin, and respiratory tract. Permissible exposure limit = 2 mg/m^3

SECTION 03 - PHYSICAL DATA

Appearance and Odor: Free flowing off white powder
pH: 1% solution 12.8
Specific Gravity: 2.0 (approximate)
Solubility in Water: 100%
Percent Volatile at 70° F: 0%

SECTION 04 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: >212° F
Extinguishing Media: Carbon dioxide or chemical foam
Special Fire Fighting Procedures: Wear NIOSH approved self-contained breathing apparatus with a full face piece.
Unusual Fire and Explosion Hazards: Contact with some metals particularly magnesium, aluminum, and zinc (galvanized) can rapidly generate hydrogen, which is explosive.

SECTION 05 - HEALTH AND FIRST AID

ACUTE AND CHRONIC HEALTH EFFECTS, AND EFFECTS OF OVEREXPOSURE

Inhalation PEL- 2 mg/m^3 . Inhalation of dusts or mists can cause damage to the upper respiratory tract and to the lung tissue. Depending on severity of exposure, effects can range from mild irritation to severe pneumonitis.

Ingestion. Ingestion either in solid or liquid form can cause very serious damage to the mucous membranes or other tissues with which contact is made, and may be fatal.

Skin Corrosive action causes burns and frequently deep ulceration with ultimate scarring. Prolonged contact destroys tissue. Dust or mist from solutions can cause irritant dermatitis.

Eye Eye contact causes severe burns; small quantities can result in permanent damage or loss of vision.



MATERIAL SAFETY
DATA SHEET

AMOQUENCH OIL F

MANUFACTURER:
Amoco Oil Company
200 East Randolph Drive
Chicago, Illinois 60601

EMERGENCY HEALTH INFORMATION: (800) 447-8735
EMERGENCY SPILL INFORMATION: (800) 424-9300
OTHER PRODUCT SAFETY INFORMATION: (312) 856-3907

IMPORTANT COMPONENTS: Solvent refined paraffinic petroleum oil. CAS #64741-88-4.
High viscosity index solvent refined paraffinic petroleum
oil. CAS #64742-54-7.

WARNING STATEMENT: None required.

APPEARANCE AND ODOR: Pale colored, oily liquid.

HEALTH HAZARD INFORMATION

EYE

EFFECT: No significant irritation expected.

FIRST AID: Flush eyes with plenty of water.

PROTECTION: None required; however, use of safety glasses is good industrial practice.

SKIN

EFFECT: None expected for single short-term exposures. Prolonged or repeated contact may produce some irritation.

FIRST AID: None required.

PROTECTION: Wear protective gloves if prolonged or repeated contact is likely.

INHALATION

EFFECT: None expected under normal conditions of use.

FIRST AID: None required.

PROTECTION: None required for normal conditions of use.

INGESTION

EFFECT: Expected to be relatively non-toxic.

FIRST AID: If a large amount is swallowed, induce vomiting. Get medical attention.

FIRE AND EXPLOSION INFORMATION

FLASHPOINT: 340°F, (COC) Minimum

EXTINGUISHING MEDIA: Agents approved for Class B hazards (e.g., dry chemical, carbon dioxide, halogenated agents, foam, steam) or water fog.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

REACTIVITY INFORMATION

STABILITY: Stable.

CHEMICAL AND PHYSICAL PROPERTIES

SOLUBILITY IN WATER: Negligible, below 0.1%

SPECIFIC GRAVITY (WATER = 1): 0.86

VISCOSITY: 100-110 SUS @ 100°F.

STORAGE AND ENVIRONMENTAL PROTECTION

STORAGE REQUIREMENTS: No special requirements.

SPILLS AND LEAKS: Treat as an oil spill. Contain and remove by mechanical means.

WASTE DISPOSAL: Enclosed-controlled incineration is recommended unless directed otherwise by applicable ordinances.

SPECIAL PRECAUTIONS: Avoid strong oxidizers.

TOXICOLOGICAL INFORMATION

Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on information from similar products, the ingredients, technical literature, and/or professional experience.

REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: Not hazardous per 29 CFR 1910.1200(d).

DOT PROPER SHIPPING NAME (BULK, LAND): Not regulated.

ISSUE INFORMATION

BY:

Stephen A. Elbert

Stephen A. Elbert
Mgr., Product Safety & Toxicology

ISSUED: June 17, 1985
SUPERSEDES: January 02, 1985

This material safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe that information to be correct but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either express or implied.

630 WEST WASHINGTON BLVD.
CHICAGO, ILLINOIS 60606
(312) 454-1000 (TELEX 25-3556)

I PRODUCT IDENTIFICATION			
Manufacturer's Name	Van Straaten Chemical Company	Telephone No.(312) 454-1000	
Address	630 West Washington Blvd., Chicago, Illinois 60606		
TRADE NAME	Vantrol 3910		
SYNONYMS			
II HAZARDOUS INGREDIENTS			
Material or Component	%	CAS No.	Hazard Data
Monoethanolamine	5-10	141-43-5	TLV=8mg/M ³
Potassium hydroxide	5-10	1310-58-3	TLV=2mg/M ³
Contains no other ingredients now known to be hazardous as defined in			
Illinois Public Act 83.240, OSHA 29 CFR 1910.1000 (subpart z), OSHA 29 1910.1200,			
and the National Fire Protection Association List of Hazardous Substances.			
III PHYSICAL DATA			
Boiling Point	NA	Melting Point	NA
Specific Gravity(H ₂ O=1)	1.160 - 1.165	Vapor Pressure	17mmHg @ 20°C
Vapor Density (Air=1)	0.6	Solubility in H ₂ O,% By Wt.	complete
% Volatiles by Vol.	76%	Evaporation Rate(Butyl Acetate=1)	<1
Appearance and Odor	Brown liquid; mild odor	3% soln: 12.0 - 12.5 concentrate: 13.1 - 13.3	

Vantrol 3910

IV FIRE AND EXPLOSION DATA

Flash Point

None

Fire Point

NA

Flammable Limits in Air % by Vol.

Lower

NA

Upper

NA

Extinguishing Media: None needed.

Special Fire

Fighting Procedures: None required.

Unusual Fire and

Explosion Hazard: None known.

V HEALTH HAZARD INFORMATION

Health Hazard Data: Concentrate is considered a hazardous material because of its alkalinity. Hazard potential is reduced at use concentrations.

Routes of Exposure and Effects of Overexposure

Inhalation: Inhalation of high concentration of mists may produce respiratory tract irritation. Ulceration of respiratory membranes may occur from prolonged inhalation.

Skin Contact: Irritating to the skin.

Skin Absorption: Skin absorption is not expected to occur.

Eye Contact: Local eye irritation will occur. If not promptly treated, extensive eye damage could occur.

Ingestion: Irritation of the mouth and gastrointestinal tract will occur immediately. Permanent damage may occur if medical attention is not obtained.

Emergency and First Aid Procedures

Eyes: Immediately flush with large amounts of water for 15 minutes and contact a physician.

Skin: Immediately flush with large amounts of water for 15 minutes. Wash contaminated clothing before reuse.

Inhalation: Contact a physician.

Ingestion: Do not induce vomiting. Drink large amounts of water and contact a physician.

Notes to Physician:

Vantrrol 3910

VI REACTIVITY DATA

Conditions Contributing to Instability: None. Stable under normal conditions.

Incompatability: Avoid contact with concentrated mineral acids.

Hazardous Decomposition Products: None

Conditions Contributing to
Hazardous Polymerization: Will not polymerize.

VII SPILL OR LEAK PROCEDURES

Steps To Be Taken If Material Is Released Or Spilled:

Flush spilled material into sanitary sewer with water. Large spills should be neutralized before disposal.

Waste Disposal Method:

Non-biodegradable components of used emulsions must be removed prior to disposal. Acid-alum or alum-polymeric deemulsifiers may be used.

VIII SPECIAL PROTECTION INFORMATION

Ventilation Requirements: If misting occurs, provide local ventilation.

Specific Personal Protective Equipment

Respiratory (Specify in Detail)	If excessive misting occurs, or if associated TLV is exceeded, provide NIOSH approved respiratory equipment with TC-21C-140 cartridge combination.
---------------------------------	--

Eyes Face shield or goggles.

Gloves Rubber.

Other Clothing And Equipment

None required.

Vantröl 3910

IX SPECIAL PRECAUTIONS

Precautionary Statements

Other Handling and
Storage Requirements

Wash contaminated clothing before use.
Bring products to room temperature before use.
Keep drums closed when not in use.
Avoid contact with eyes.
Avoid breathing mists.
Do not take internally.


Prepared By: John K. Howell, Director of Research

Address: Van Straaten Chemical Company
630 W. Washington Blvd.
Chicago, IL 60606

Date: June 22, 1984

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME CRAFT LABORATORIES-INC.		EMERGENCY TELEPHONE NO. 219-432-9467
ADDRESS (Number, Street, City, State, and ZIP Code) 1901-23 LAKEVIEW DRIVE FT. WAYNE, INDIANA 46808		
CHEMICAL NAME AND SYNONYMS NONE		TRADE NAME AND SYNONYMS POWER CLEAN
CHEMICAL FAMILY CATALACTIVE TYPE CLEANER	FORMULA CHEMICAL MIXTURE	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS		NA	BASE METAL		NA
CATALYST		NA	ALLOYS		NA
VEHICLE		NA	METALLIC COATINGS		NA
SOLVENTS		NA	FILLER METAL PLUS COATING OR CORE FLUX		NA
ADDITIVES		NA	OTHERS		NA
OTHERS		NA			NA
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	209	SPECIFIC GRAVITY (H ₂ O=1)	1.04
VAPOR PRESSURE (mm Hg.) @ 25°C	22.4	PERCENT VOLATILE BY VOLUME (%)	89
VAPOR DENSITY (AIR=1) @ 25°C	2.6	EVAPORATION RATE (_____=1)	1
SOLUBILITY IN WATER	COMPLETE	ACTIVE	13
APPEARANCE AND ODOR	GREEN, SLIGHT ODOR		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NON FLAMMABLE	FLAMMABLE LIMITS	LeI	UeI
		NONE		
EXTINGUISHING MEDIA	NONE			
SPECIAL FIRE FIGHTING PROCEDURES	NONE			
UNUSUAL FIRE AND EXPLOSION HAZARDS	NONE			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
TOXICITY LIMIT VALUES HAVE NOT BEEN ESTABLISHED FOR THIS PRODUCT.
EFFECTS OF OVEREXPOSURE
 THIS MATERIAL HAS A LOW ODOR & IS NOT CONSIDERED HAZARDOUS AS DEFINED
 BY USDL SAFETY & HEALTH REGULATIONS (29 CFR SEC 1501, 2)
EMERGENCY AND FIRST AID PROCEDURES
SKIN: FLUSH WELL WITH WATER.
EYES: FLUSH WITH WATER, IF IRRITATION PERSISTS CALL A PHYSICIAN.
INGESTION: DRINK LARGE VOLUME OF MILK OR OTHER LIQUID, CALL A PHYSICIAN
 IMMEDIATELY.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	XX	
INCOMPATABILITY (Materials to avoid)			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	XX	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
SMALL SPILLS: WIPE UP LIQUID AND RINSE AREA WITH WATER.	
LARGE SPILLS: COLLECT LIQUID AND RETURN TO CLOSED CONTAINER.	
WASTE DISPOSAL METHOD	

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)		
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General) XXX	OTHER
PROTECTIVE GLOVES	FOR PROLONGED USE	EYE PROTECTION
OTHER PROTECTIVE EQUIPMENT		NORMAL SAFETY GLASSES

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
ALWAYS STORE UNUSED PORTION IN ORIGINAL CONTAINER	
OTHER PRECAUTIONS	

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 38329
FEMCO, INC

FEMCO POWER BRITE LAUN DET 35-17-1

04/25/86

(SEE SECTION 1C FOR ADDRESS/PHONE #)

***** * SECTION 1 * MATERIAL IDENTIFICATION * *****

1. CHEMICAL NAME AND SYNONYMS
2. TRADE NAME AND SYNONYMS FEMCO POWER BRITE LAUN DET 35-17-1
3. CHEMICAL FAMILY CARBONATES, SILICATES,
BORAX, NONIONIC SURFACANTS AND CHELATING AGENTS.
4. FORMULA 35-17-1

***** * SECTION 2 * HAZARDOUS INGREDIENTS * *****

1. INGREDIENT		TLV X (UNITS)
SODIUM METASILICATE 6834-92-0	<20%	2 MG/M3
SODIUM CARBONATE 497-19-8	<80%	N/E
SODIUM LAURETH SULFATE 9004-82-4	<5%	N/E
ALKYL PHENOL ETHOXYLATE 26027-38-3	<5%	N/E

SEE MSDS'S
FOLLOWING:

SEE #13706
SEE #15926
SEE #72019
SEE #72035

***** * SECTION 3 * PHYSICAL DATA * *****

1. BOILING POINT (F) N/A
2. VAPOR PRESSURE (MM HG) N/A
3. VAPOR DENSITY (AIR = 1) N/A
4. SOLUBILITY IN WATER N/E
5. APPEARANCE AND ODOR WHITE POWDER
LEMON ODOR
6. SPECIFIC GRAVITY (WATER = 1) N/E
7. PERCENT VOLATILE BY VOLUME (NN.N) NIL
8. EVAPORATION RATE (N-BUTYLACETATE = 1). N/A
9. FREEZING/MELTING POINT (DEG/F) N/E
10. PH OF SOLUTION 11.6
11. HEAT OF SOLUTION N/E

(CONTINUED ON NEXT PAGE)

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 38329 FEMCO POWER ERITE LAUN DFT 35-17-1 (CONTINUED) 04/25/86

* SECTION 4 * FIRE AND EXPLOSION HAZARD *

1. FLASH POINT (METHOD USED)..... NONFLAMMABLE

2. FLAMMABLE LIMITS LEL N/A UEL N/A

3. EXTINGUISHING MEDIA
NONFLAMMABLE

4. SPECIAL FIRE FIGHTING PROCEDURES NONE

5. UNUSUAL FIRE AND EXPLOSION HAZARDS.... NONE

See following MSDS's
for specific ingredients
for this information
in Sections 5-9.

* SECTION 10 * INFORMATION SOURCES *

THIS INFORMATION IS A COLLATION OF DATA PROVIDED BY:
INFORMATION ON THIS FORM IS FURNISHED SOLELY FOR THE PURPOSE OF COMPLIANCE
WITH THE 1970 OCCUPATIONAL SAFETY AND HEALTH ACT AND SHALL NOT BE USED FOR
ANY OTHER PURPOSE. USE OR DISSEMINATION OF ALL OR ANY PART OF THIS
INFORMATION CAN BE GROUNDS FOR LEGAL ACTION.
TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE.
HOWEVER, NEITHER THE SUPPLIER OF THIS FORM NOR ANY OF ITS AFFILIATES ASSUMES
ANY LIABILITY WHATSOEVER FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION
CONTAINED HEREIN. FINAL DETERMINATION OF THE SUITABILITY OF ANY INFORMATION
OR MATERIAL FOR THE USE CONTEMPLATED, THE MANNER OF USE AND WHETHER THERE IS
ANY INFRINGEMENT OF PATENTS IS THE SOLE RESPONSIBILITY OF THE USER.

219-256-5556
FEMCO, INC
1217 EAST MC KINLEY
MISHAWAKA, IN

219-267-3251

46544

* SECTION 11 * EMPTY CONTAINER INFORMATION *

DISPOSE OF IN A SANITARY LANDFILL.
RETURN TO MANUFACTURER IF APPLICABLE. OTHERWISE
TRIPLE RINSE, INERT OR PURGE AND DISPOSE OF IN A
SANITARY LANDFILL.

* SECTION 12 * TRANSPORTATION REQUIREMENTS *

1. DOT CLASSIFICATION NOT REGULATED

2. PROPER SHIPPING NAME

3. UN# -OR- NA# N/A

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 13706 SODIUM METASILICATE PENTA
WARSAW CHEMICAL CO.

04/01/86
(SEE SECTION 1C FOR ADDRESS/PHONE #)

This is a constituent
of Femco Power Brite

* SECTION 1 * MATERIAL IDENTIFICATION *

1. CHEMICAL NAME AND SYNONYMS SODIUM METASILICATE, PENTAHYDRATE
METAPENTA, #26, UNIFLO
2. TRADE NAME AND SYNONYMS SODIUM METASILICATE PENTA
3. CHEMICAL FAMILY
4. FORMULA $\text{Na(2)SiO(2)-5H(2)O}$

* SECTION 2 * HAZARDOUS INGREDIENTS *

- | 1. INGREDIENT | | TLV
% (UNITS) |
|---------------------------|------|------------------|
| SODIUM SILICATE 6834-92-0 | 100% | 2 MG/M3 |

* SECTION 3 * PHYSICAL DATA *

1. BOILING POINT (F) N/A
2. VAPOR PRESSURE (MM HG) N/A
3. VAPOR DENSITY (AIR = 1) N/A
4. SOLUBILITY IN WATER 28% BY WEIGHT
5. APPEARANCE AND ODOR WHITE CRYSTAL SOLID,
ODORLESS
6. SPECIFIC GRAVITY (WATER = 1) N/A
7. PERCENT VOLATILE BY VOLUME (NA.N) NIL
8. EVAPORATION RATE (N-BUTYLACETATE = 1). N/A
9. FREEZING/MELTING POINT (DEG/F) 162
10. PH OF SOLUTION 12.4
11. HEAT OF SOLUTION N/E

(CONTINUED ON NEXT PAGE)

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 13706

SODIUM METASILICATE PENTA

(CONTINUED) 04/01/86

* SECTION 4 * FIRE AND EXPLOSION HAZARD *

1. FLASH POINT (METHOD USED)..... NONFLAMMABLE
2. FLAMMABLE LIMITS LEL N/A UEL N/A
3. EXTINGUISHING MEDIA
WATER SPRAY, DRY
CHEMICALS, CO2, OR FOAM
4. SPECIAL FIRE FIGHTING PROCEDURES PRESSURE DEMAND SELF-
CONTAINED BREATHING APPARATUS SHOULD BE PROVIDED
FOR FIRE FIGHTERS IN BUILDINGS OR CONFINED AREAS
WHERE THIS PRODUCT IS STORED.
5. UNUSUAL FIRE AND EXPLOSION HAZARDS..... PROTECTIVE CLOTHING FOR
SKIN AND EYE PROTECTION SHOULD BE WORN TO PROTECT
AGAINST HIGHLY ALKALINE CHEMICAL.

* SECTION 5 * SPECIAL PRECAUTIONS *

1. PRECAUTIONS TO BE TAKEN IN HANDLING
AND STORAGE
- 1B. ADDITIONAL STORAGE PRECAUTIONS
WEAR ALL PROTECTIVE CLOTHING DESCRIBED ABOVE. ALWAYS ADD SLOWLY TO LIQUID
SURFACE TO MAKE SOLUTION, AND STIR CONSTANTLY.
- *DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
- *AVOID BREATHING DUST, MISTS, OR SPRAY.
- *DO NOT TAKE INTERNALLY.
- *USE WITH ADEQUATE VENTILATION AND EMPLOY RESPIRATORY PROTECTION WHEN EXPO-
SURE TO DUST, MISTS OR SPRAY IS POSSIBLE.
- *WHEN HANDLING, WEAR CHEMICAL SPLASH GOGGLES, FACE SHIELD, RUBBER GLOVES AND
PROTECTIVE CLOTHING.
- *WASH THOROUGHLY AFTER HANDLING OR CONTACT AS EXPOSURE CAN CAUSE BURNS WHICH
ARE NOT IMMEDIATELY PAINFUL OR VISIBLE.
- *KEEP CONTAINER CLOSED.

2. OTHER PRECAUTIONS

* SECTION 6 * HEALTH HAZARD DATA *

1. THRESHOLD LIMIT VALUE 2 MG/M3
2. OVEREXPOSURE EFFECTS/COMMENTS
EXPOSURE LIMITS/DATA
TOXICITY:
LC 50 INHALATION: N/E
LD 50 DERMAL: SEVERE SKIN IRRITANT TO RABBITS WITH 250 MG/24 HRS
LD 50 INGESTION: 800 MG/KG (RAT)

(CONTINUED ON NEXT PAGE)

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 13706

SODIUM METASILICATE PENTA

(CONTINUED) 04/01/36

CHRONIC: THE CHRONIC LOCAL EFFECT MAY CONSIST OF MULTIPLE AREAS OF SUPERFICIAL DESTRUCTION OF THE SKIN OR OF PRIMARY IRRITANT DERMATITIS. SIMILARLY, INHALATION OF SPRAY OR MISTS MAY RESULT IN VARYING DEGREES OF IRRITATION OR DAMAGE TO THE RESPIRATORY TRACT TISSUES.

ACUTE: CORROSIVE TO MUCOUS MEMBRANES OF THE RESPIRATORY TRACT, MOUTH, THROAT, ESOPHAGUS AND STOMACH. CORROSIVE TO EYE AND SKIN AND POSSIBLE PERMANENT CORNEAL DAMAGE.

OSHA:

PEL/TWA: 2 MG/M3 AS NAOH

PEL/CEILING: N/E

ACGIH:

TLV/TWA: 2 MG/M3 AS NAOH

TLV/STEL: N/E

OTHER EFFECTS/DATA:

EYES: DRY PRODUCT CAN CAUSE TISSUE DESTRUCTION AND PERMANENT EYE DAMAGE IF NOT TREATED.

SKIN: DRY PRODUCT CAN BE SEVERE SKIN IRRITANT. MAY BE CORROSIVE AND CAN CAUSE SEVERE BURNS IF NOT WASHED IMMEDIATELY.

INGESTION: CORROSIVE TO MUCOUS MEMBRANES OF THE MOUTH, THROAT, ESOPHAGUS AND STOMACH. MAY CAUSE PERFORATION OF THE ESOPHAGUS OR STOMACH.

INHALATION: EXPOSURE TO MISTS OR SPRAY MAY CAUSE COUGHING, SNEEZING, OR OTHER SYMPTOMS OF UPPER RESPIRATORY TRACT IRRITATION. SEVERE EXPOSURE MAY RESULT IN LUNG TISSUE DAMAGE DUE TO CORROSIVE EFFECTS.

3. EMERGENCY & FIRST AID PROCEDURES

3B. ADDITIONAL DATA

*EYES: OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY THEN SEEK MEDICAL ATTENTION. IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST SEVERAL MINUTES HOLDING LIDS APART TO ENSURE FLUSHING OF THE ENTIRE SURFACE. WASHING EYES WITHIN 1 MINUTE IS ESSENTIAL TO ACHIEVE MAXIMUM EFFECTIVENESS. SEEK MEDICAL ATTENTION IMMEDIATELY.

*SKIN: WASH WITH PLENTY OF WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND FOOTWEAR. WASH CLOTHING BEFORE REUSE. FOOTWEAR SHOULD BE DECONTAMINATED BEFORE REUSE. SEEK MEDICAL ATTENTION IF SYMPTOMS ARE PRESENT

*INGESTION: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. (IF AVAILABLE, GIVE SEVERAL GLASSES OF MILK). IF VOMITING OCCURS SPONTANEOUSLY, KEEP AIRWAY CLEAR. SEEK MEDICAL ATTENTION IMMEDIATELY.

*INHALATION: GET PERSON OUT OF CONTAMINATED AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF SYMPTOMS ARE PRESENT.

* SECTION 7 * REACTIVITY DATA *

1. UNSTABLE .. 2. STABLE .. X

3. INCOMPATIBILITY (MATERIALS TO AVOID) .

AVOID CONTACT WITH ACIDIC MATERIALS

4. HAZARDOUS DECOMPOSITION PRODUCTS NONE

5. HAZARDOUS POLYMERIZATION NO

6. CONDITIONS TO AVOID NONE

(CONTINUED ON NEXT PAGE)

ITEM # 13706 SODIUM METASILICATE PENTA

(CONTINUED) 04/C1/36

* SECTION 8 * SPILL OR LEAK PROCEDURES *

ADDITIONAL SPILL/LEAK PROCEDURES

IF A MATERIAL IS SPILLED, STEPS SHOULD BE TAKEN TO CONTAIN LIQUIDS AND PREVENT DISCHARGES TO STREAMS OR SEWER SYSTEMS. SPILLS OR RELEASES SHOULD BE REPORTED, IF REQUIRED, TO THE APPROPRIATE LOCAL, STATE AND FEDERAL REGULATORY AGENCIES.

WASTE DISPOSAL: CLEAN-UP ACTION SHOULD BE CAREFULLY PLANNED AND EXECUTED. SHIPMENT, STORAGE, AND/OR DISPOSAL OF WASTE MATERIALS ARE REGULATED AND ACTION TO HANDLE SPILLED OR RELEASED MATERIALS MUST MEET THE APPLICABLE RULES. IF ANY QUESTIONS EXISTS, THE APPROPRIATE AGENCIES SHOULD BE CONTACTED TO ASSURE PROPER ACTION BEING TAKEN.

* SECTION 9 * SPECIAL PROTECTION INFORMATION *

1. RESPIRATORY PROTECTION (SPECIFY TYPE). USE NIOSH/MSHA APPROVED
RESPIRATOR FOR DUSTS, MISTS OR SPRAY.
2. VENTILATION LOCAL EXHAUST
3. SPECIAL
4. PROTECTIVE GLOVES RUBBER
5. EYE PROTECTION CHEMICAL SAFETY GLASSES
FACE SHIELD
6. OTHER PROTECTIVE EQUIPMENT PROTECTIVE CLOTHING.
EYE WASH AND SAFETY SHOWERS.

* SECTION 10 * INFORMATION SOURCES *

THIS INFORMATION IS A COLLATION OF DATA PROVIDED BY:
DIAMOND SHANROCK CHEMICALS COMPANY

INFORMATION ON THIS FORM IS FURNISHED SOLELY FOR THE PURPOSE OF COMPLIANCE WITH THE 1970 OCCUPATIONAL SAFETY AND HEALTH ACT AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. USE OR DISSEMINATION OF ALL OR ANY PART OF THIS INFORMATION CAN BE GROUNDS FOR LEGAL ACTION.

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE. HOWEVER, NEITHER THE SUPPLIER OF THIS FORM NOR ANY OF ITS AFFILIATES ASSUMES ANY LIABILITY WHATSOEVER FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. FINAL DETERMINATION OF THE SUITABILITY OF ANY INFORMATION OR MATERIAL FOR THE USE CONTEMPLATED, THE MANNER OF USE AND WHETHER THERE IS ANY INFRINGEMENT OF PATENTS IS THE SOLE RESPONSIBILITY OF THE USER.

219-267-3251 800-424-9300 CHEMTREC
WARSAW CHEMICAL CO.
ARGONNE ROAD
P.O. BOX 858

(CONTINUED ON NEXT PAGE)

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 13706 SODIUM METASILICATE PENTA

(CONTINUED) 04/01/36

WARSAW, IN 46580

* SECTION 11 * EMPTY CONTAINER INFORMATION *

DISPOSE OF IN A SANITARY LANDFILL.
RETURN TO MANUFACTURER IF APPLICABLE. OTHERWISE
TRIPLE RINSE, INERT OR PURGE AND DISPOSE OF IN A
SANITARY LANDFILL.

* SECTION 12 * TRANSPORTATION REQUIREMENTS *

1. DOT CLASSIFICATION NOT REGULATED

2. PROPER SHIPPING NAME

3. UN# -OR- NA# N/A

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 15926 SODA ASH DENSE
WARSAW CHEMICAL CO.

(SEE SECTION 10 FOR ADDRESS/PHONE #)

03/31/86

*This is a constituent
of Femco Power Brite.*

* SECTION 1 * MATERIAL IDENTIFICATION *

1. CHEMICAL NAME AND SYNONYMS SODIUM CARBONATE, ANHYDROUS

2. TRADE NAME AND SYNONYMS SODA ASH DENSE

3. CHEMICAL FAMILY CARBONATES

4. FORMULA Na_2CO_3

* SECTION 2 * HAZARDOUS INGREDIENTS *

1. INGREDIENT	TLV % (UNITS)
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* SECTION 3 * PHYSICAL DATA *

1. BOILING POINT (F) N/E

2. VAPOR PRESSURE (MM HG) N/A

3. VAPOR DENSITY (AIR = 1) N/A

4. SOLUBILITY IN WATER 7 G/100 G @ 0 DEG C

5. APPEARANCE AND COLOR WHITE, GRANULAR SOLID,
ODORLESS

6. SPECIFIC GRAVITY (WATER = 1) N/A

7. PERCENT VOLATILE BY VOLUME (N/A) N/E

8. EVAPORATION RATE (N-BUTYLACETATE = 1) N/A

9. FREEZING/MELTING POINT (DEG/F) 1564

10. PH OF SOLUTION 11.3

11. HEAT OF SOLUTION N/E

(CONTINUED ON NEXT PAGE)

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 15925

SODA ASH DENSE

(CONTINUED) 03/31/86

* SECTION 4 * FIRE AND EXPLOSION HAZARD *

1. FLASH POINT (METHOD USED)..... NONFLAMMABLE
2. FLAMMABLE LIMITS LEL N/A UEL N/A
3. EXTINGUISHING MEDIA
USE STANDARD FIRE-
FIGHTING TECHNIQUES IN EXTINGUISHING FIRES.
4. SPECIAL FIRE FIGHTING PROCEDURES AS IN ANY FIRE, PREVENT
HUMAN EXPOSURE TO FIRE, SMOKE, FUMES, OR PRODUCTS
OF COMBUSTION. EVACUATE NON-ESSENTIAL PERSONNEL
FROM THE FIRE AREA.
5. UNUSUAL FIRE AND EXPLOSION HAZARDS..... UNDER FIRE CONDITIONS
(TEMPERATURES ABOVE 1000 DEG C/1832 DEG F), IT
WILL DECOMPOSE TO GIVE OFF CARBON DIOXIDE.

* SECTION 5 * SPECIAL PRECAUTIONS *

1. PRECAUTIONS TO BE TAKEN IN HANDLING
AND STORAGE
- 1B. ADDITIONAL STORAGE PRECAUTIONS
THE DRY PRODUCT IS NOT CORROSIVE TO MATERIALS COMMONLY USED IN THE CON-
STRUCTION OF PROCESS EQUIPMENT, STORAGE, AND SHIPPING CONTAINERS. HOWEVER,
HOT CONCENTRATED SOLUTIONS OF THE PRODUCT ARE MILDLY CORROSIVE TO STEEL.

THE PRODUCT SHOULD BE STORED IN A COOL, DRY AREA. BULK PRODUCT MAY BE
STORED IN CLEAN, EPOXY-COATED STEEL SILCS. EXERCISE DUE CAUTION TO PREVENT
DAMAGE TO OR LEAKAGE FROM THE CONTAINER.

RESIDUAL QUANTITIES OF THE PRODUCT DO NOT REQUIRE SPECIAL HANDLING WHEN
DISPOSING OF EMPTY CONTAINERS. EMPTY CONTAINERS MAY BE DISCARDED IN THE
GENERAL TRASH OR BY MEANS OF APPROVED-TYPES OF INCINERATION EQUIPPED WITH
APPROPRIATE ENVIRONMENTAL POLLUTION CONTROLS.

2. OTHER PRECAUTIONS
- 2B. ADDITIONAL PRECAUTIONS

CONTINUED FROM SECTION 6, "FIRST AID & EMERGENCY PROCEDURES"

IF A KNOWN EXPOSURE OCCURS OR IS SUSPECTED, IMMEDIATELY INITIATE THE
RECOMMENDED PROCEDURES BELOW. IF FURTHER TREATMENT IS REQUIRED, SEEK MEDICAL
ADVICE FROM A PHYSICIAN, THE NEAREST HOSPITAL, OR THE NEAREST POISON CONTROL
CENTER. INFORM THE PERSON CONTACTED OF THE TYPE AND EXTENT OF EXPOSURE,
DESCRIBE THE VICTIM'S SYMPTOMS, AND FOLLOW THE ADVICE GIVEN. FOR ADDITIONAL
INFORMATION, CALL COLLECT, DAY OR NIGHT STAUFFER CHEMICAL COMPANY
(203) 226-6602 OR CHEMTREC (800) 424-9300.

(CONTINUED ON NEXT PAGE)

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 15926 SODA ASH DENSE

(CONTINUED) 03/31/86

* SECTION 6 * HEALTH HAZARD DATA *

1. THRESHOLD LIMIT VALUE N/E

2. OVEREXPOSURE EFFECTS/COMMENTS

EXPOSURE LIMITS/DATA

TOXICITY:

LC 50 INHALATION: N/E

LD 50 DERMAL: N/E

LD 50 INGESTION: 4,000 MG/KG (RATS)

THE COMMONLY RECOGNIZED INJURY ASSOCIATED WITH SODIUM CARBONATE IS FROM CONTACT OF PARTICLES OR SOLUTIONS WITH THE EYES. THE FREE DUST, AS WELL AS MISTS AND SPRAYS FROM SOLUTION, HAS AN IRRITATING EFFECT ON SKIN, MUCOUS MEMBRANES, AND RESPIRATORY TRACT. SENSITIVITY REACTIONS TO THIS MATERIAL HAVE BEEN REPORTED. PROLONGED SKIN CONTACT MAY RESULT IN SKIN ULCERS. PROLONGED AND REPEATED INHALATION OF DUSTS OR MISTS MAY RESULT IN ULCERATION OF THE NASAL SEPTUM.

OSHA:

PEL/TWA: N/E

PEL/CEILING: N/E

ACGIH:

TLV/TWA: N/E

TLV/STEL: N/E

OTHER EFFECTS/DATA:

EYES: EYE CONTACT MAY CAUSE SEVERE IRRITATION.

SKIN: SODIUM CARBONATE IS A PRIMARY SKIN IRRITANT. CHRONIC SKIN ULCERS OF THE HANDS AND WRISTS MAY RESULT AFTER PROLONGED SKIN CONTACT. SOME INDIVIDUALS MAY EXHIBIT A SENSITIVITY OR ALLERGIC REACTION AFTER CONTACT WITH THE MATERIAL.

INHALATION: THE EFFECTS OF CHRONIC OVEREXPOSURE ARE UPPER RESPIRATORY IRRITATION. PROLONGED EXPOSURE TO HIGH EXPOSURES MAY RESULT IN PERFORATION OF THE NASAL SEPTUM.

3. EMERGENCY & FIRST AID PROCEDURES

3B. ADDITIONAL DATA

*EYES: IMMEDIATELY FLUSH THE EYES WITH LARGE QUANTITIES OF RUNNING WATER FOR A MINIMUM OF 15 MINUTES. HOLD THE EYELIDS APART DURING THE FLUSHING TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYE AND LIDS WITH WATER. DO NOT ATTEMPT TO NEUTRALIZE WITH CHEMICAL AGENTS. OBTAIN MEDICAL ATTENTION AS SOON AS POSSIBLE. OILS OR OINTMENTS SHOULD NOT BE USED. CONTINUE THE FLUSHING FOR AN ADDITIONAL 15 MINUTES IF THE PHYSICIAN IS NOT IMMEDIATELY AVAILABLE.

*SKIN: WASH ALL AFFECTED AREAS WITH PLENTY OF SOAP AND WATER. SEEK MEDICAL ATTENTION IF IRRITATION OCCURS.

*INGESTION: DO NOT INDUCE VOMITING. IMMEDIATELY GIVE LARGE QUANTITIES OF WATER. IF VOMITING DOES OCCUR, GIVE FLUIDS AGAIN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN OR THE NEAREST POISON CONTROL CENTER IMMEDIATELY.

*INHALATION: REMOVE FROM CONTAMINATED ATMOSPHERE. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION OCCURS.

CONTINUED IN SECTION 5, "SPECIAL PRECAUTIONS".

(CONTINUED ON NEXT PAGE)

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 15926 SODA ASH DENSE

(CONTINUED) 03/31/86

***** * SECTION 7 * REACTIVITY DATA * *****

1. UNSTABLE .. 2. STABLE .. X

3. INCOMPATIBILITY (MATERIALS TO AVOID) .

REACTS WITH HYDRATED LIME TO FORM NaOH. REACTS
VIOLENTLY WITH ACIDS AND CO2 IS EVOLVED. SPECIAL
CARE WHEN HANDLING SODA ASH AND LIME.

4. HAZARDOUS DECOMPOSITION PRODUCTS CONTACT WITH REDUCING
SUGARS PRODUCES CO.

5. HAZARDOUS POLMERIZATION NO

6. CONDITIONS TO AVOID DECOMPOSE AND DEVELOP CO2
AT >1,000 DEG C. MOISTURE
OF CO2 WILL GO TO NaHCO3.

***** * SECTION 8 * SPILL OR LEAK PROCEDURES * *****

ADDITIONAL SPILL/LEAK PROCEDURES

MAKE SURE ALL PERSONNEL INVOLVED IN THE SPILL CLEANUP FOLLOW GOOD INDUS-
TRIAL HYGIENE PRACTICES.

SMALL SPILLS CAN BE HANDLED ROUTINELY. USE ADEQUATE VENTILATION OR WEAR
RESPIRATOR TO PREVENT INHALATION. WEAR SUITABLE PROTECTIVE CLOTHING AND EYE
PROTECTION TO PREVENT SKIN AND EYE CONTACT. USE THE FOLLOWING PROCEDURES:

SWEEP UP AS MUCH OF THE SPILLED MATERIAL AS POSSIBLE. TRANSFER TO A SUIT-
ABLE CONTAINER AND DISCARD IN AN ENVIRONMENTALLY ACCEPTABLE MANNER. REMAINING
RESIDUE SHOULD BE FLUSHED WITH COPIOUS AMOUNTS OF WATER.

LARGE SPILLS SHOULD BE HANDLED ACCORDING TO A PREDETERMINED PLAN. FOR
ASSISTANCE IN DEVELOPING A PLAN, CONTACT THE TECHNICAL SERVICES DEPARTMENT,
INDUSTRIAL CHEMICAL DIVISION, STAUFFER CHEMICAL COMPANY, WESTPORT, CT 06880

IN CASE OF EMERGENCY, CALL, DAY OR NIGHT (800) 424-9300. (CHEMTREC)

WASTE DISPOSAL: FOR ASSISTANCE IN DISPOSING OF UNUSED MATERIAL CONTACT
THE TECHNICAL SERVICE DEPARTMENT, STAUFFER CHEMICAL COMPANY.

***** * SECTION 9 * SPECIAL PROTECTION INFORMATION * *****

1. RESPIRATORY PROTECTION (SPECIFY TYPE). NIOSH APPROVED, HALF
FACE PIECE CARTRIDGE, AIR-PURIFYING RESPIRATOR
FOR LOW CONCENTRATIONS.

2. VENTILATION LOCAL EXHAUST

3. SPECIAL

4. PROTECTIVE GLOVES RUBBER

5. EYE PROTECTION CHEMICAL SAFETY GOGGLES
FACE SHIELD.

6. OTHER PROTECTIVE EQUIPMENT LONG SLEEVE CLOTHING TO
REDUCE EXPOSURE.

(CONTINUED ON NEXT PAGE)

ITEM # 15926 SODA ASH DENSE

(CONTINUED) 03/31/86

* SECTION 10 * INFORMATION SOURCES *

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219-267-3251
WARSAW CHEMICAL CO.
ARGONNE ROAD
P.O. BOX 353
WARSAW, IN 46580

800-424-9300 CHEMTREC

* SECTION 11 * EMPTY CONTAINER INFORMATION *

DISPOSE OF IN A SANITARY LANDFILL.
RETURN TO MANUFACTURER IF APPLICABLE. OTHERWISE
TRIPLE RINSE, INERT OR PURGE AND DISPOSE OF IN A
SANITARY LANDFILL.

* SECTION 12 * TRANSPORTATION REQUIREMENTS *

2. PROPER SHIPPING NAME

3. UN# -OR- NA# N/A

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 72019 STEPAN'S STEEL CS-460
WARSAW CHEMICAL CO.

04/07/36
(SEE SECTION 10 FOR ADDRESS/PHONE #)

*This is a constituent of
Femco Power Brite.*

***** * SECTION 1 * MATERIAL IDENTIFICATION * *****

1. CHEMICAL NAME AND SYNONYMS SODIUM LAURETH SULFATE
2. TRADE NAME AND SYNONYMS STEPAN'S STEEL CS-460
3. CHEMICAL FAMILY SURFACTANT
4. FORMULA

***** * SECTION 2 * HAZARDOUS INGREDIENTS * *****

- | 1. INGREDIENT | TLV
% (UNITS) |
|-----------------------|------------------|
| ETHYL ALCOHOL 64-17-5 | 13-15% 1000 PPM |

***** * SECTION 3 * PHYSICAL DATA * *****

1. BOILING POINT (F) 190 DEG F
2. VAPOR PRESSURE (MM HG) N/E
3. VAPOR DENSITY (AIR = 1) <1
4. SOLUBILITY IN WATER N/E
5. APPEARANCE AND ODOR N/E
6. SPECIFIC GRAVITY (WATER = 1) 1.035
7. PERCENT VOLATILE BY VOLUME (N/A) 35-40%
8. EVAPORATION RATE (N-BUTYLACETATE = 1). <1
9. FREEZING/MELTING POINT (DEG/F) N/E
10. PH OF SOLUTION N/E
11. HEAT OF SOLUTION N/E

(CONTINUED ON NEXT PAGE)

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 72019 STEPAN'S STEEL CS-450

(CONTINUED) 04/07/86

* SECTION 4 * FIRE AND EXPLOSION HAZARD *

1. FLASH POINT (METHOD USED)..... 32 DEG F SFTA C. C.
2. FLAMMABLE LIMITS LEL >3.3% UEL N/E
3. EXTINGUISHING MEDIA
WATER, CARBON DIOXIDE, ION
DRY CHEMICAL OR FOAM. CLASS A, BC, OR ABC FIRE
EXTINGUISHERS.
4. SPECIAL FIRE FIGHTING PROCEDURES NONE
5. UNUSUAL FIRE AND EXPLOSION HAZARDS.... NONE

* SECTION 5 * SPECIAL PRECAUTIONS *

1. PRECAUTIONS TO BE TAKEN IN HANDLING
AND STORAGE
STORE IN COOL, WELL VENTILATED AREA. AVOID SPARKS
FIRE OR OPEN FLAMES. EQUIPMENT AND CONTAINERS
SHOULD BE GROUNDED WHEN TRANSFERRING OR USING
MATERIAL.
2. OTHER PRECAUTIONS

* SECTION 6 * HEALTH HAZARD DATA *

1. THRESHOLD LIMIT VALUE N/E
2. OVEREXPOSURE EFFECTS/COMMENTS
EXPOSURE LIMITS/DATA

EFFECTS OF OVEREXPOSURE:

CONTACT WITH EYES MAY BE PAINFUL AND IRRITATING. PROLONGED CONTACT WITH SKIN MAY CAUSE IRRITATION. PROLONGED INHALATION OF FUMES MAY CAUSE INEBRIATION, HEADACHE, NAUSEA, OR UNCONSCIOUSNESS.

THIS PRODUCT COULD CONTAIN, AS A CONTAMINANT AT UP TO A FEW TENTHS OF A PERCENT 1,4 DIOXANE, WHICH CAN BE ABSORBED BY INHALATION AND THROUGH THE SKIN. PLEASE BE ADVISED THAT 1,4-DIOXANE HAS BEEN FOUND TO CAUSE CANCER IN RATS WHEN GIVEN ORALLY FOR TWO YEARS AT CONCENTRATIONS OF 0.5% AND ABOVE IN DRINKING WATER.

3. EMERGENCY & FIRST AID PROCEDURES
- 3B. ADDITIONAL DATA

*FLUSH EYES IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. WASH OFF SKIN AND REMOVE CONTAMINATED CLOTHING. IF VAPORS OR MIST CAUSE IRRITATION OR DISTRESS, GO TO FRESH AIR. GIVE OXYGEN OR APPLY ARTIFICIAL RESPIRATION IF NEEDED. IF ANY SYMPTOMS PERSIST CONSULT A PHYSICIAN.

(CONTINUED ON NEXT PAGE)

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 72019 STEPAN'S STEOL CS-46C

(CONTINUED) 04/07/86

***** * SECTION 7 * REACTIVITY DATA * *****

1. UNSTABLE .. 2. STABLE .. X
3. INCOMPATIBILITY (MATERIALS TO AVOID) .
STRONG OXIDIZING AGENTS
4. HAZARDOUS DECOMPOSITION PRODUCTS SULFUR DIOXIDE AND
HYDROGEN SULFIDE
5. HAZARDOUS POLYMERIZATION NO
6. CONDITIONS TO AVOID NONE

***** * SECTION 8 * SPILL OR LEAK PROCEDURES * *****

PREVENT ELECTRICAL SPARKING. VENTILATE AREA.
SOAK UP WITH ADSORBENT. SHOVEL INTO WASTE
CONTAINERS.
WASTE DISPOSAL: BURY, INCINERATE, OR FLUSH TO
SEWAGE DISPOSAL SYSTEM IN ACCORDANCE WITH ALL
LEGAL REGULATIONS.

***** * SECTION 9 * SPECIAL PROTECTION INFORMATION * *****

1. RESPIRATORY PROTECTION (SPECIFY TYPE). IF VAPORS ARE PRESENT,
USE A MESA OR NIOSH APPROVE GAS MASK FOR ORGANIC
VAPORS.
2. VENTILATION LOCAL EXHAUST
3. SPECIAL
4. PROTECTIVE GLOVES RUBBER
5. EYE PROTECTION CHEMICAL SAFETY GOGGLES
OR FACE SHIELD
6. OTHER PROTECTIVE EQUIPMENT WEAR PROTECTIVE CLOTHING
TO PREVENT REPEATED OR PROLONGED CONTACT.

***** * SECTION 10 * INFORMATION SOURCES * *****

THIS INFORMATION IS A COLLATION OF DATA PROVIDED BY:
STEPAN

INFORMATION ON THIS FORM IS FURNISHED SOLELY FOR THE PURPOSE OF COMPLIANCE
WITH THE 1970 OCCUPATIONAL SAFETY AND HEALTH ACT AND SHALL NOT BE USED FOR
ANY OTHER PURPOSE. USE OR DISSEMINATION OF ALL OR ANY PART OF THIS
INFORMATION CAN BE GROUNDS FOR LEGAL ACTION.
TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE.
HOWEVER, NEITHER THE SUPPLIER OF THIS FORM NOR ANY OF ITS AFFILIATES ASSUMES
ANY LIABILITY WHATSOEVER FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION
CONTAINED HEREIN. FINAL DETERMINATION OF THE SUITABILITY OF ANY INFORMATION

(CONTINUED ON NEXT PAGE)

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 72019

STEPAN'S STEEL CS-450

(CONTINUED) 04/07/86

OR MATERIAL FOR THE USE CONTEMPLATED, THE MANNER OF USE AND WHETHER THERE IS ANY INFRINGEMENT OF PATENTS IS THE SOLE RESPONSIBILITY OF THE USER.

219-267-3251 800-424-9300 CHEMTREC
WARSAW CHEMICAL CO.
ARGONNE ROAD
P.O. BOX 358
WARSAW, IN 46580

* SECTION 11 * EMPTY CONTAINER INFORMATION *

DISPOSE OF IN A SANITARY LANDFILL.
RETURN TO MANUFACTURER IF APPLICABLE. OTHERWISE
TRIPLE RINSE, INERT OR PURGE AND DISPOSE OF IN A
SANITARY LANDFILL.

* SECTION 12 * TRANSPORTATION REQUIREMENTS *

1. DOT CLASSIFICATION COMBUSTIBLE LIQUID
2. PROPER SHIPPING NAME
3. UN# -OR- NA# N/A

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 72035 N-95/B-300/NP-9/8.8# GAL
WARSAW CHEMICAL CO.

03/28/86

(SEE SECTION 10 FOR ADDRESS/PHONE #)

*This is a constituent
of Femco Power Brick.*

* SECTION 1 * MATERIAL IDENTIFICATION *

1. CHEMICAL NAME AND SYNONYMS NONYLPHENOXYPOLYETHOXYETHANOL

2. TRADE NAME AND SYNONYMS N-95/B-300/NP-9/8.8# GAL

3. CHEMICAL FAMILY ALKYL PHENOL ETHOXYLATE

4. FORMULA C(9)H(19)O(6)H(4)O
(CH(2)CH(2)O)NH

* SECTION 2 * HAZARDOUS INGREDIENTS *

1. INGREDIENT	TLV % (UNITS)
N-95/B-300 26027-38-3	N/E

* SECTION 3 * PHYSICAL DATA *

1. BOILING POINT (F) N/E

2. VAPOR PRESSURE (MM HG) <1

3. VAPOR DENSITY (AIR = 1) >1

4. SOLUBILITY IN WATER SOLUBLE

5. APPEARANCE AND ODOR COLORLESS - STRAWCOLORED
SLIGHT ODOR

6. SPECIFIC GRAVITY (WATER = 1) 1.06

7. PERCENT VOLATILE BY VOLUME (NN.N) NIL

8. EVAPORATION RATE (N-BUTYLACETATE = 1) NIL

9. FREEZING/MELTING POINT (DEG/F) N/E

10. PH OF SOLUTION NEUTR

11. HEAT OF SOLUTION N/E

(CONTINUED ON NEXT PAGE)

MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 72035 N-95/B-300/NP-9/E.8# GAL

(CONTINUED) 03/28/36

* SECTION 4 * FIRE AND EXPLOSION HAZARD *

1. FLASH POINT (METHOD USED)..... 460 DEG F COC
2. FLAMMABLE LIMITS LEL N/E UEL N/E
3. EXTINGUISHING MEDIA
ALCOHOL FOAM OR CARBON DIOXIDE, STEAM, WATER FOG,
DIOXIDE OR DRY CHEMICALS.
4. SPECIAL FIRE FIGHTING PROCEDURES WEAR SELF-CONTAINED
BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED
IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE
WHEN FIGHTING FIRES.
5. UNUSUAL FIRE AND EXPLOSION HAZARDS..... HEATING IN AIR MAY
PRODUCE IRRITATING ACIDS, KETONES AND ALDEHYDES.

* SECTION 5 * SPECIAL PRECAUTIONS *

1. PRECAUTIONS TO BE TAKEN IN HANDLING
AND STORAGE
MINIMUM FEASIBLE HANDLING TEMPERATURES SHOULD BE
MAINTAINED. PERIODS OF EXPOSURE TO HIGH TEMPERA-
TURES SHOULD BE MINIMIZED. WATER CONTAMINATION
SHOULD BE AVOIDED.
2. OTHER PRECAUTIONS
CONSIDERED TO BE RELATIVELY TOXIC TO AQUATIC LIFE
AT CONCENTRATION AS LOW AS 5 PPM.

* SECTION 6 * HEALTH HAZARD DATA *

1. THRESHOLD LIMIT VALUE N/E
2. OVEREXPOSURE EFFECTS/COMMENTS
EXPOSURE LIMITS/DATA
TOXICITY:
LC 50 INHALATION: N/E
LD 50 DERMAL: 3 G/KG (RABBIT) PRACTICALLY NONTOXIC
LD 50 INGESTION: 3 G/KG (RAT) SLIGHTLY TOXIC
SKIN: 2.4/8.0 (RABBIT); SLIGHTLY IRRITATING.
EYES: 35.5/110 (RABBIT); MODERATELY IRRITATING.

CHRONIC: AMES MUTAGENICITY TEST = NEGATIVE
CELL TRANSFORMATION - NEG.; RAT HEPATOCYTE (UDS) - NEG.
ACUTE:
EYES: CAUSES MODERATE EYE IRRITATION.
SKIN: SLIGHTLY IRRITATING WITH POSSIBLE REDNESS, EDEMA OR DRYING OF
THE SKIN. MAY CAUSE DERMATITIS ON PROLONGED OR REPEATED CONTACT.

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MATERIAL SAFETY DATA SHEETS (MSDS)

ITEM # 72035 N-95/B-300/NP-9/2.8# GAL

(CONTINUED) 03/28/36

3. EMERGENCY & FIRST AID PROCEDURES

3B. ADDITIONAL DATA

*EYES: FLUSH THOROUGHLY WITH WATER FOR AT LEAST FIFTEEN MINUTES. GET MEDICAL ATTENTION.

*SKIN: WASH EXPOSED AREAS WITH SOAP AND WATER.

*INGESTION: NONE CONSIDERED NECESSARY.

*INHALATION: NONE CONSIDERED NECESSARY.

* SECTION 7 * REACTIVITY DATA *

1. UNSTABLE .. 2. STABLE .. X

3. INCOMPATIBILITY (MATERIALS TO AVOID) .

NONE

4. HAZARDOUS DECOMPOSITION PRODUCTS HEATING IN AIR MAY PRODUCE ACIDS, KETONES AND ALDEHYDES.

5. HAZARDOUS POLYMERIZATION NO

6. CONDITIONS TO AVOID NONE

* SECTION 8 * SPILL OR LEAK PROCEDURES *

ADDITIONAL SPILL/LEAK PROCEDURES

AVOID CONTACT WITH EYES. CONTAIN SPILL IF POSSIBLE. WIPE UP OR ABSORB SUITABLE MATERIAL AND SHOVEL UP.

WASTE DISPOSAL: UNDER RCRA, IT IS THE RESPONSIBILITY OF THE USER OF PRODUCTS TO DETERMINE, AT THE TIME OF DISPOSAL, WHETHER PRODUCT MEETS RCRA CRITERIA FOR HAZARDOUS WASTE. THIS IS BECAUSE PRODUCT USES, TRANSFORMATION MIXTURE, PROCESSES, ETC. MAY RENDER THE RESULTING MATERIAL HAZARDOUS.

WASTE CLASSIFICATION: PRODUCT HAS BEEN EVALUATED FOR RCRA CHARACTERISTICS AND DOES NOT MEET CRITERIA OF A HAZARDOUS WASTE IF DISCARDED IN ITS PURCHASE FORM.

* SECTION 9 * SPECIAL PROTECTION INFORMATION *

1. RESPIRATORY PROTECTION (SPECIFY TYPE). NONE REQUIRED

2. VENTILATION LOCAL EXHAUST

3. SPECIAL

4. PROTECTIVE GLOVES CHEMICAL RESISTANT

5. EYE PROTECTION CHEMICAL SAFETY GOGGLES.

6. OTHER PROTECTIVE EQUIPMENT IMPERVIOUS CLOTHING AND BOOTS.

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MATERIAL SAFETY DATA SHEETS (MSDS)

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(CONTINUED) 03/25/86

* SECTION 10 * INFORMATION SOURCES *

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TEXACO, INC.

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219-267-3251 800-424-9300 CHEMTREC
WARSAW CHEMICAL CO.
ARGONNE ROAD
P.O. BOX 858
WARSAW, IN 46580

* SECTION 11 * EMPTY CONTAINER INFORMATION *

DISPOSE OF IN A SANITARY LANDFILL.
RETURN TO MANUFACTURER IF APPLICABLE. OTHERWISE
TRIPLE RINSE, INERT OR PURGE AND DISPOSE OF IN A
SANITARY LANDFILL.

* SECTION 12 * TRANSPORTATION REQUIREMENTS *

1. DOT CLASSIFICATION NOT REGULATED
2. PROPER SHIPPING NAME
3. UN# -OR- NA# N/A